ATTACHMENT (2)

FY15 Special Project
Red Hill Fuel Storage Facility – Tank Upgrade and Release Detection Systems (RDS) and Tank Tightness Testing Study
Pearl Harbor Hawaii

Submittal Requirements and Schedule

REFERENCES:

(1) Revised Statement of Indefinite Delivery Indefinite Quantity Architect-Engineer Services for Civil Projects, Various Locations in All Areas under the Cognizance of NAVFAC Pacific, N62742-13-D-0001 dated 15 August 2013.

A. SUBMITTAL REQUIREMENTS:

a. This study shall be done in accordance with Reference (a), Basic IDIQ Contract SAES and the information contained herein.

b. AE shall provide a single report that consists of 3 separate, independent sections:

1. Red Hill Bulk Fuel Storage Facility,
2. Tank Upgrade Alternatives to Minimize the Release of Fuel
3. Alternatives for release (leak) detection systems and tank tightness testing

Each section shall have a cover sheet that identifies the contract number and task order, report title, section title and AE information. Each section shall be numbered and presented in the order as noted above.

c. ***Red Hill Bulk Fuel Storage Facility*** - Prepare a report that describes the Red Hill Bulk Fuel Storage Facility tank construction and present operating condition, release detection system and tank tightness test. Also include general information on the operating, maintenance and repair procedures. The purpose of this report is to clearly identify the present status of the fuel storage facility and current operating, maintenance and repair procedures. Identify frequency of inspections.

d. ***Alternatives to Minimize the Release of Fuel*** - Prepare a report that identifies, describes, and evaluates the best available practicable technologies (BAPT) that can be applied to a steel wall UST to prevent leaks. For the purpose of this report, BAPT shall mean the release prevention methods, equipment, repair, maintenance, new construction and procedures, or any combination thereof, that offers the best available protection to the environment and that is feasible and cost-effective for the tanks at the Facility. The selection and approval of BAPT shall be based on, but is not limited to, consideration of the following factors: (1) the risks and benefits of the particular technology; (2) the capabilities, feasibility and requirements of the technology and facilities involved; (3) the anticipated operational life; and (4) the cost of implementing and maintaining the technology. Reliance on any one of these factors to the exclusion of other factors is inappropriate. As a minimum, report on the following BAPT:

- Current Tank Upgrade Procedures
  - Obtain from FLCPH the *Tank Inspection, repair and Maintenance (TIRM) Procedures Report* from FLCPH and include the document in an appendix to this report. The current procedures shall be evaluated as a BAPT.
- Secondary Containment Alternatives
- Coatings

- Liners/Bladders
- Associated Release Detection Systems
- Any other alternatives deemed promising

1. For each of the BAPT, investigate and report on the following:

   a. Description of the technology. Include pictures, drawings, etc. to assist in understanding how the BAPT works.
   b. Identify commercially available products and identify facilities/sites the technology has been utilized and its performance
   c. Design or actual service life
   d. Operating and Maintenance Requirements
   e. Testing and Commissioning Procedures
   f. Rationale for the Testing and Commissioning Procedures
   g. Discussion on Risks and Benefits
   h. Discussion on Reliability
   i. Ability to repair failures
   j. Manufacturer technical information
   k. Discuss applicability of the technology at the Red Hill Bulk Fuel Storage Facility. Include in the discussion:
      i. Effect on current fuel storage capacity
      ii. Compatibility with current release detection system and tank tightness tests
      iii. Compatibility with existing ancillary equipment and if required, upgrades to implement the technology
      iv. Costs (10% or less, margin of error) including all capital improvements, maintenance and operating costs and costs to upgrade ancillary equipment
      v. Construction schedule

2. Develop a Decision Matrix for the BAPT to aid in analyzing the data. As a minimum, include in the decision matrix the following criteria :

   a. Applicability at the Red Hill Bulk Fuel Storage Facility
   b. Successful implementation at other facilities in preventing leaks
   c. Operating and Maintenance Requirements and Procedures
   d. Ability to identify release location and quantity
   e. Constructability
   f. Costs (10% or less, margin of error) including all capital improvements, maintenance and operating costs and costs to upgrade ancillary equipment
   g. Reliability
   h. Ability to repair failures
   i. Design or actual service life

e. ***Release Detection Systems and Tank Tightness Testing*** - Prepare a report that identifies, describes and evaluates alternatives for Release Detection Systems and Tank Tightness Testing of the fuel storage tanks at Red Hill Bulk Fuel Storage Facility. The report shall include:

   - Description of EXISTING release detection system equipment and current practices
     - Obtain from FLCPH the *Current Fuel Release Monitoring Systems Report* and include the document in an appendix to this report.
   - Static and dynamic release detection alternatives

- Tank Tightness Testing Alternatives

1. For each release detection system and/or tank tightness testing alternative, investigate and report on the following:

    a. Description of the system and theory of operation
        1) Include pictures and drawings to assist in understanding how the system works
        2) Identify available products
        3) Identify locations in which the system is or has been utilized and its performance in preventing releases
    b. Third Party Certification
    c. Sensitivity including lowest release rate that the system is capable of detecting
    d. Discussion on reliability
    e. Costs (10% or less, margin of error) including all capital improvements, maintenance and operating costs and costs to upgrade ancillary equipment
    f. Accuracy of system if applied at a tank at Red Hill
    g. Other characteristics as necessary

2. Develop a Decision Matrix for the BAPT to aid in analyzing the data and include the existing systems. As a minimum, include in the decision matrix the following criteria:

    a. Third Party Certification
    b. Sensitivity
    c. Equipment Reliability
    d. Response Time
    e. Ability to identify location and quantity of leak
    f. Constructability
    g. Cost
    h. Effectiveness

f. **In Progress Review Submittal** shall be submitted as noted in Attachment (1), Study Schedule. This submittal shall include, as a minimum, an outline of each of the three (3) report sections and the following: 1) ***Alternatives to Minimize the Release of Fuel*** section of the report, as a minimum, the outline shall identify all BAPTs to be presented, a COMPLETE description of the BAPT and a rough order of magnitude cost (ROM) to implement the alternative, and 2) ***Release Detection Systems and Tank Tightness Testing*** section of the report, as a minimum, the outline shall identify all release detection systems and tank tightness tests to be presented, a COMPLETE description and discussion on the key features of the system and test method , and a ROM to implement the system/test.

g. **100% Prefinal Report** shall be submitted as noted in Attachment 1, Study Schedule. The report shall contain the information as identified in this attachment. The report shall be in its final form and shall incorporate comments received during the In-Progress Review Meeting. This submittal will be further reviewed and commented by government agencies.

h. **Final Report** shall be submitted as noted in Attachment 1, Study Schedule. The report shall contain the information as identified in this attachment. The report shall be in its final form and incorporate comments received during the In-Progress Review Meeting and 100% Prefinal Report Meeting.

B. **SUBMITTAL SCHEDULE**:

B1. **In Progress Report Submittal**: The A-E shall deliver the specified number of Reports (hardcopies and electronic) to each person listed below.

REVIEWERS **NAME / ORGANIZATION** **ADDRESS / PHONE NO.**	**In Progress Report Submittal** **(Hard = Hardcopies [1] / Elec. = Electronic [2])** **Final Scope Meeting Report**
[redacted] NAVFAC Pacific 258 Makalapa Drive Ste 100 JBPHH, Hawaii 96860 [redacted]	28 Hard 20 Elec.
[redacted] Fuel Department Deputy Director NAVSUP FLC Pearl Harbor Hawaii Neosho Avenue Bldg. 1757 JBPHH, Hawaii 96860 [redacted]	3 Hard 2 Elec.
TOTALS	**31 Hard** **22 Elec.**

[1] Hardcopies: Use 11"x17" size sheets for drawings and 8.5"x11" size sheets for all other information (text, figures, charts, tables, calculations, etc.). Soft Cover Bound, with Cover Sheet.

[2] Electronic Copies: In addition to providing all reports in Adobe Acrobat (*.pdf) electronic format, provide all final reports and supporting documents in their native electronic file formats - Microsoft Office (*.doc, *.xls, etc.), Autodesk AutoCAD (*.dwg), cost estimate, design calculations, etc. Provide electronic submittals on CD. As a minimum, all PDF files shall be bookmarked to the first page of each major section.

B2. **100% Pre-Final Report**: The A-E shall deliver the specified number of Final report (hardcopies and electronic) to each person listed below.

REVIEWERS **NAME / ORGANIZATION** **ADDRESS / PHONE NO.**	**100% PRE-FINAL REPORT** **No. Of Copies** **(Hard = Hardcopies [1] / Elec. = Electronic [2])** **100**
[redacted] NAVFAC Pacific 258 Makalapa Drive Ste 100 JBPHH, Hawaii 96860 [redacted]	28 Hard 20 Elec.
[redacted] Fuel Department Deputy Director NAVSUP FLC Pearl Harbor Hawaii Neosho Avenue Bldg. 1757 JBPHH, Hawaii 96860 [redacted]	3 Hard 2 Elec.
TOTALS	**31 Hard** **22 Elec.**

[1] Hardcopies: Use 11"x17" size sheets for drawings and 8.5"x11" size sheets for all other information (text, figures, charts, tables, calculations, etc.). Soft Cover Bound, with Cover Sheet.

[2] Electronic Copies: Provide the Submittal in the required Adobe Acrobat (*.pdf) electronic format Provide electronic submittals on CD (1 Submittal/CD) – use multiple CDs as necessary. For persons receiving calculations and reports, include these files on the respective CDs. As a minimum, all PDF files shall be bookmarked to the first page of each major section.

B3. **Final Report**: The A-E shall deliver the specified number of Reports (hardcopies and electronic) to each person listed below.

REVIEWERS **NAME / ORGANIZATION** **ADDRESS / PHONE NO.**	**FINAL REPORT** **No. Of Copies** **(Hard = Hardcopies [1] / Elec. = Electronic [2])** **Final Report**
[redacted] NAVFAC Pacific 258 Makalapa Drive Ste 100 JBPHH, Hawaii 96860 [redacted]	28 Hard 20 Elec.
[redacted] Fuel Department Deputy Director NAVSUP FLC Pearl Harbor Hawaii Neosho Avenue Bldg. 1757 JBPHH, Hawaii 96860 [redacted]	3 Hard 2 Elec.
TOTALS	**31 Hard** **22 Elec.**

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